The efficacy of Trichoderma harzianum T73s as a biocontrol agent of Fusarium ear rot disease of maize

Abstract

Fusarium ear rot (FER) disease in maize reduces grain quality and yield to an appreciable extent. Based on virulence assay, F. proliferatum B202c was the most pathogenic isolate among other species including F. verticillioides. This pathogen was challenged in dual culture assays with 72 isolates of Trichoderma sp., which were isolated from soil samples. T. harzianum T73s showed highest percentage inhibition of 73.10% was further tested for its efficacy to suppress FER under glasshouse conditions. The application of T73s every week, immediately after planting reduced the severity of FER with DSI 0.5% compared with control, 4.75%. Thus, T. harzianum T37s can be used as good biocontrol agent and has potential for further tests in the field and on commercial scale.

Keyword: Fusarium proliferatum; F. verticillioides; Trichoderma harzianum; Maize; Biological control; Fusarium ear rot.